ELSEVIER

Journal of Materials Processing Technology 120 (2002) 466–467

Journal of Materials Processing Technology

www.elsevier.com/locate/jmatprotec

Author Index of Volume 120

Abe, Y., 412
Abo-Elkhar, M., 296
Ahn, K.-C., 458
Altan, T., 348
Álvarez, L., 281
An, J., 30
Atkinson, J., 374

Bae, K.-Y., 458
Bae, W.B., 290
Bai, G.R., 90
Bao, Q.S., 68
Bao, Y., 259
Beck, T., 450
Berni, G., 310
Boey, F.Y.C., 215

Cao, Y., 37
Cappetti, N., 303
Chang, W.S., 208
Chen, P., 275
Chen, Q., 270
Chen, R., 21
Chen, T.M., 126
Chen, W., 94
Chunguang, Z., 107
Colás, R., 432
Cotterell, M.G., 327
Cox, I.J., 310

Daoud, A., 296
Das, M.K., 397
David Chua, S.N., 335
De Vin, L.J., 322
Ding, W., 94
Donnarumma, A., 303
Duan, J., 275
Duan, Q., 249
Duan, X., 426

Es-Sadiqi, E., 365

Fang, W., 13
Fodor, P., 432
Fubao, Z., 144

Gao, Y., 140
German, R.M., 419
Ghoreishi, M., 374
Ghoshdastidar, P.S., 397, 438
Guanjun, Q., 107
Guanxin, C., 101
Guifang, Z., 53
Guo, D., 265
Guo, X.F., 202
Guodong, W., 53

Hardy, S.J., 385
Hashmi, M.S.J., 335, 341
Hocheng, H., 6
Hongfan, J., 76
Hongyu, W., 101
Hongzan, B., 84
Hoppe, S., 450
Hu, J., 94
Hu, P., 37, 45
Huaibao, W., 62
Hwang, B.C., 290

Jehng, W.-K., 115
Jia, M., 21
Jianzhong, W., 84
Jin, Z., 265
Jin, Z.H., 17
Joshi, S.C., 215
Jung, H.K., 355

Kang, C.G., 355
Kelly, J.F., 327
Kim, H.Y., 290
Klocke, F., 450
Krieg, T., 450
Kumar, A., 438
Kuo, H.-C., 151, 169
Kuo, H.C., 186

Laiying, L., 1
Lam, Y.C., 215
Laszczewski, H., 310
Lee, T.-H., 458
Leong, K.C., 249
Lewis, R.W., 310
Li, C.S., 26
Li, D., 37
Lin, J.C., 226
Lin, Y.C., 126
Lin, Z., 259
Liu, D.M., 140
Liu, F., 202
Liu, G., 259
Liu, X.H., 26
Liu, Y., 80
Liu, Y.B., 30
Liu, Y.Q., 45
Liu, Z., 94
Livatyali, H., 348
Lu, Y., 94
Luan, G.F., 90
Luis, C.J., 281

Mac Donald, B.J., 335, 341
Magee, J., 322
Mannan, M.A., 243
Masuda, I., 412
Matsuo, M., 412
Mezzetti, M., 432
Mori, K., 412
Morris, J.W., 385
Muju, M.K., 438
Müller, N., 450

Na, S.J., 208
Naddeo, A., 303
Ning, C., 107
Nöthe, T., 450

Pa, P.S., 6
Paes, M., 365
Pappalardo, M., 303
Parng, S.H., 133
Patel, J.K., 316
Puertas, I., 281

Raedt, H.-W., 450
Ransing, R.S., 310
Rodríguez, A., 432
Rong, M., 107

Shangwu, X., 53
Shen, Q., 111
Sheppard, T., 426
Shichun, D., 101
Shuiping, L., 84
Sikdar, S.K., 243
Smith, L.N., 419
Smith, M.L., 419
Song, X., 21
Song, Y., 237
Sun, G., 265
Sweeney, K., 450

Takuda, H., 412
Tan, F.L., 249
Tang, G.Y., 13
Tang, Y.Y., 68
Tay, F.E.H., 243
Thomas, J.T., 385
Tok, A.I.Y., 215

Ugalde, M.J., 281

Elsevier Science B.V.
PII: S0924-0136(01)01237-7

Wang, F., 237
Wang, G.D., 26
Wang, J., 37
Wang, J.C., 45
Wang, Q., 94
Wang, R.F., 17
Wang, S.G., 68
Wang, S.W., 126
Wang, W., 275
Wang, Y., 111, 270
Wang, Y.T., 68
Wang, Y.Z., 17
Wang, Z.Q., 140
Wang, Z.R., 62
Wang, Z.T., 90
Wansheng, Z., 101
Weili, X., 62
Wilshire, B., 316
Wu, H.C., 348
Wu, L.-J., 151, 169
Wu, L.J., 186

Xianghua, L., 53
Xiao, D.Z., 140
Xinbo, L., 144
Xu, D., 237
Xu, L., 275
Xu, W., 259
Xu, Y., 90

Yan, H., 275
Yan, Y., 237
Yan, Y.J., 13
Yang, B., 30
Yang, G.C., 202
Yang, H., 80
Yang, S.Y., 133
Yang, Y.Y., 17
Yongming, K., 1
Yu, W., 76
Yuan, X., 76
Yuying, Y., 62

Ze-en, M., 1
Zhan, M., 80
Zhang, J., 13
Zhang, M., 265
Zhang, M.Z., 30
Zhang, R., 237
Zhang, S.H., 90
Zhang, Y., 111
Zhenlong, W., 101
Zhichu, H., 84
Zhihao, J., 107
Zhiliang, Z., 144
Zhong, J., 275
Zhongqin, L., 62
Zhu, Y., 94
Zoqui, E.J., 365

ELSEVIER

Journal of Materials Processing Technology 120 (2002) 468–473

Journal of Materials Processing Technology

www.elsevier.com/locate/jmatprotec

Subject Index of Volume 120

Abductive network
Optimum cooling system design of a free-form injection mold using an abductive network, 226
Algorithm
On-line quality monitoring in plasma-arc welding, 270
Aluminium alloy
Finite element simulation of warm deep drawing of aluminium alloy sheet when accounting for heat conduction, 412
Minimal lubrication machining of aluminium alloys, 327
Aluminium–silicon alloys
Macro- and microstructure analysis of SSM A356 produced by electromagnetic stirring, 365
Aluminum matrix alloys
Influence of Al_2O_3 or ZrO_2 particulate addition on the microstructure aspects of AlNi and AlSi alloys, 296
Analysis
A technical note cupola efficiency improvement by increasing air blast temperature, 281
ANOVA
A comparative experimental study of machining characteristics in vibratory, rotary and vibro-rotary electro-discharge machining, 374
Arc signals
On-line quality monitoring in plasma-arc welding, 270
Artificial neural networks
Application of neural computing in basic oxygen steelmaking, 310
Aspect ratio
A numerical study of solidification of *n*-hexadecane based on the enthalpy formulation, 249

Bar
Simulation on temperature field of 50CrV4 automobile gear bar steel in continuous rolling by FEM, 26
$BaTiO_3$
Power law fluids and Bingham plastics flow models for ceramic tape casting, 215
Binder hold down force
2D elasto-plastic FE simulation of the drawbead drawing process, 17
Binder wrap
Stamping and stamping simulation with a blankholder gap, 62
Bingham plastics
Power law fluids and Bingham plastics flow models for ceramic tape casting, 215
B–L planar anisotropy yield function
The numerical analysis of anisotropic sheet metals in deep-drawing processes, 45
Blank design
Research on applying one-step simulation to blank design in sheet metal forming, 111
Blank interface
Effect of Si on the interfacial bonding strength of Al–Pb alloy strips and hot-dip aluminized steel sheets by hot rolling, 30
Blankholder gap
Stamping and stamping simulation with a blankholder gap, 62
Blending
A neural network approach to surface blending based on digitized points, 76
Block interface
Effect of Si on the interfacial bonding strength of Al–Pb alloy strips and hot-dip aluminized steel sheets by hot rolling, 30
Bonding strength
Effect of Si on the interfacial bonding strength of Al–Pb alloy strips and hot-dip aluminized steel sheets by hot rolling, 30
Bulge forming
Near-net-shape manufacture of engineering components using bulge-forming processes: a review, 341

Casting
A technical note cupola efficiency improvement by increasing air blast temperature, 281
Ceramic particulates
Influence of Al_2O_3 or ZrO_2 particulate addition on the microstructure aspects of AlNi and AlSi alloys, 296
Ceramic tape casting
Power law fluids and Bingham plastics flow models for ceramic tape casting, 215
Citrate sol–gel method
Synthesis of Li_3VO_4 by the citrate sol–gel method and its ionic conductivity, 21
Clearance
Influence of the meshing clearance on the performance of conjugate helical surfaces, 140
Coining
Prediction and elimination of springback in straight flanging using computer-aided design methods. Part 2: FEM predictions and tool design, 348
Combined processes
Process planning for laser-assisted forming, 322
Comminution process modeling
Nonlinear comminution process modeling based on GA–FNN in the computational comminution system, 84
Composites
Influence of Al_2O_3 or ZrO_2 particulate addition on the microstructure aspects of AlNi and AlSi alloys, 296
Compression tests
Determination of metal material flow stress by the method of C-FEM, 144
Compressor blade
Influence of the shape and position of the preform in the precision forging of a compressor blade, 80
Computational comminution
Nonlinear comminution process modeling based on GA–FNN in the computational comminution system, 84
Conjugate
Experimental validation of a quasi three-dimensional conjugate heat transfer model for the metering section of a single-screw plasticating extruder, 397

Elsevier Science B.V.
PII: S0924-0136(01)01238-9

Conjugate helical surfaces
Influence of the meshing clearance on the performance of conjugate helical surfaces, 140
Cooling system
Optimum cooling system design of a free-form injection mold using an abductive network, 226
Cupola
A technical note cupola efficiency improvement by increasing air blast temperature, 281
Cutting
Examples of FEM application in manufacturing technology, 450
3D non-linear FEM analysis
Manufacture of the die of an automobile deck part based on rapid prototyping and rapid tooling technology, 237
3D rigid–viscoplastic FEM
Influence of the shape and position of the preform in the precision forging of a compressor blade, 80

Decision making
Fuzzy-logic application in the structural optimisation of a support plate for electrical accumulator in a motor vehicle, 303
Deep and small hole
Ultrasonic and electric discharge machining to deep and small hole on titanium alloy, 101
Die material
The application of a turning tool as the electrode in electropolishing, 6
Die of automobile deck
Manufacture of the die of an automobile deck part based on rapid prototyping and rapid tooling technology, 237
Dieless drawing
Experiment study on the variation of wall thickness during dieless drawing of stainless steel tube, 90
Discrete Kirchhoff triangle plate shell element
The numerical analysis of anisotropic sheet metals in deep-drawing processes, 45
Drawbead
2D elasto-plastic FE simulation of the drawbead drawing process, 17
Drawbead restraining force
2D elasto-plastic FE simulation of the drawbead drawing process, 17
Drawing
Stamping and stamping simulation with a blankholder gap, 62
Drilling
Minimal lubrication machining of aluminium alloys, 327

Electro-discharge machining
A comparative experimental study of machining characteristics in vibratory, rotary and vibro-rotary electro-discharge machining, 374
Examples of FEM application in manufacturing technology, 450
Electromagnetic interference
Fracture types and thickness distribution in superplastic sheets formed with plastic injection molding, 133
Electromagnetic stirring
Macro- and microstructure analysis of SSM A356 produced by electromagnetic stirring, 365
Electron microscopy
Improvement of the magnetic properties of nanocomposite permanent magnetic alloys with Dy and Ga substitutions, 265
Electroplastic effect
Effect of current pulses on the drawing stress and properties of Cr17Ni6Mn3 and 4J42 alloys in the cold-drawing process, 13
Electropolishing
The application of a turning tool as the electrode in electropolishing, 6
Enthalpy formulation
A numerical study of solidification of *n*-hexadecane based on the enthalpy formulation, 249
EPC
Evaluation of the effect of vacuum on mold filling in the magnesium EPC process, 94
Expansion of stent
Finite-element simulation of stent expansion, 335
Experiment study
Experiment study on the variation of wall thickness during dieless drawing of stainless steel tube, 90
Extremely thin elements
Analysis of the non-steady state vertical–horizontal rolling process in roughing trains by the three-dimensional finite element method, 53

FEM
Simulation on temperature field of 50CrV4 automobile gear bar steel in continuous rolling by FEM, 26
Variable blankholder force in U-shaped part forming for eliminating springback error, 259
Prediction and elimination of springback in straight flanging using computer-aided design methods. Part 2: FEM predictions and tool design, 348
Shape optimisation using FEA software: a V-shaped anvil as an example, 426
FEM simulation
Determination of metal material flow stress by the method of C-FEM, 144
Final holding time
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Finite element method
Analysis of the non-steady state vertical–horizontal rolling process in roughing trains by the three-dimensional finite element method, 53
Finite-element simulation of stent expansion, 335
Examples of FEM application in manufacturing technology, 450
Finite element simulation
Finite element simulation of warm deep drawing of aluminium alloy sheet when accounting for heat conduction, 412
Flange earing
The numerical analysis of anisotropic sheet metals in deep-drawing processes, 45
Flank wear
Topography of the flank wear surface, 243
Flexible manufacturing system
Petri net models applied to analyze automatic sequential pressing systems, 115
Flow stress
Determination of metal material flow stress by the method of C-FEM, 144
Forming
Forming of seamless pipe fittings, 432
Friction test
An experimental study on forming characteristics of pre-coated sheet metals, 290
Front side
On-line quality monitoring in plasma-arc welding, 270
Fuzzy controller
Fuzzy control of a heat-bending system, 186
Fuzzy logic
Fuzzy-logic application in the structural optimisation of a support plate for electrical accumulator in a motor vehicle, 303
Fuzzy neural network
Nonlinear comminution process modeling based on GA–FNN in the computational comminution system, 84

Fuzzy theory
An image tracking system for welded seams using fuzzy logic, 169

Genetic algorithm
Nonlinear comminution process modeling based on GA–FNN in the computational comminution system, 84
Grey theory
Prediction of heat-affected zone using Grey theory, 151
Grinding
Examples of FEM application in manufacturing technology, 450

Heat bending
Fuzzy control of a heat-bending system, 186
Heat source equation
A study on the prediction of the laser weld shape with varying heat source equations and the thermal distortion of a small structure in micro-joining, 208
Heat transfer model
Experimental validation of a quasi three-dimensional conjugate heat transfer model for the metering section of a single-screw plasticating extruder, 397
Heat-affected zone
Prediction of heat-affected zone using Grey theory, 151
Heating
Forming of seamless pipe fittings, 432
Hemming
Prediction and elimination of springback in straight flanging using computer-aided design methods. Part 2: FEM predictions and tool design, 348
n-Hexadecane
A numerical study of solidification of *n*-hexadecane based on the enthalpy formulation, 249
Hot working
Forming of seamless pipe fittings, 432
HSLA
The challenge to produce consistent mechanical properties in Nb-HSLA strip steels, 316

Image tracking of welded seams
An image tracking system for welded seams using fuzzy logic, 169
Imaginary flow channel
Power law fluids and Bingham plastics flow models for ceramic tape casting, 215
Induction heating process
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Initial liquid superheat
A numerical study of solidification of *n*-hexadecane based on the enthalpy formulation, 249
Injection molding
Computer simulation of transport processes during injection mold-filling and optimization of the molding conditions, 438
Intermetallic compound
Effect of Si on the interfacial bonding strength of Al–Pb alloy strips and hot-dip aluminized steel sheets by hot rolling, 30
Ionic conductivity
Synthesis of Li_3VO_4 by the citrate sol–gel method and its ionic conductivity, 21

Just in time
Petri net models applied to analyze automatic sequential pressing systems, 115

KMAS-2D
Section analysis of industrial sheet-metal stamping processes, 37

Laser forming
Process planning for laser-assisted forming, 322
Laser micro-welding
A study on the prediction of the laser weld shape with varying heat source equations and the thermal distortion of a small structure in micro-joining, 208
Li_3VO_4
Synthesis of Li_3VO_4 by the citrate sol–gel method and its ionic conductivity, 21

Macro-segregation
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Macrostructure
Macro- and microstructure analysis of SSM A356 produced by electromagnetic stirring, 365
Magnesium alloy
Evaluation of the effect of vacuum on mold filling in the magnesium EPC process, 94
Magnetic materials
Improvement of the magnetic properties of nanocomposite permanent magnetic alloys with Dy and Ga substitutions, 265
Manufacturing technology
Examples of FEM application in manufacturing technology, 450
MARC
Shape optimisation using FEA software: a V-shaped anvil as an example, 426
Martensite transformation
A study on the wear behavior of hardened medium carbon steel, 126
Mathematical model
A study on a virtual manufacturing model of a revolving milling cutter in 2-axis numerical control processing, 68
Mathematical modelling
Some fundamental considerations for the control of residual flatness in tension levelling, 385
Mechanical properties
The challenge to produce consistent mechanical properties in Nb-HSLA strip steels, 316
Meshing clearance
Influence of the meshing clearance on the performance of conjugate helical surfaces, 140
Metal forming
Examples of FEM application in manufacturing technology, 450
Metering section
Experimental validation of a quasi three-dimensional conjugate heat transfer model for the metering section of a single-screw plasticating extruder, 397
Micro-EDM
Ultrasonic and electric discharge machining to deep and small hole on titanium alloy, 101
Microstructural evolution
Forming of seamless pipe fittings, 432
Microstructure
Improvement of the magnetic properties of nanocomposite permanent magnetic alloys with Dy and Ga substitutions, 265
Macro- and microstructure analysis of SSM A356 produced by electromagnetic stirring, 365
Microstructure transmissibility
Microstructure transmissibility in preparing SiC ceramics from natural wood, 107
Mindlin curve element
Section analysis of industrial sheet-metal stamping processes, 37
Minimal lubrication
Minimal lubrication machining of aluminium alloys, 327
Mold filling
Evaluation of the effect of vacuum on mold filling in the magnesium EPC process, 94

Multi-line heating
Fuzzy control of a heat-bending system, 186
Multiple drawing
Stamping and stamping simulation with a blankholder gap, 62

Nanostructures
Improvement of the magnetic properties of nanocomposite permanent magnetic alloys with Dy and Ga substitutions, 265
Natural convection
A numerical study of solidification of *n*-hexadecane based on the enthalpy formulation, 249
Nb
The challenge to produce consistent mechanical properties in Nb-HSLA strip steels, 316
Neural networks
A neural network approach to surface blending based on digitized points, 76
A neural network approach for solution of the inverse problem for selection of powder metallurgy materials, 419
Nucleation inhibition
Development of a nucleation inhibitive coated mold for the rapid solidification of superalloy melt, 202
Numerical analysis
A study on the prediction of the laser weld shape with varying heat source equations and the thermal distortion of a small structure in micro-joining, 208
Numerical control processing
A study on a virtual manufacturing model of a revolving milling cutter in 2-axis numerical control processing, 68
Numerical simulation
Computer simulation of transport processes during injection mold-filling and optimization of the molding conditions, 438

One-step simulation
Research on applying one-step simulation to blank design in sheet metal forming, 111
Optimisation
Shape optimisation using FEA software: a V-shaped anvil as an example, 426

Partial fluid lubrication
Industrial experiments and findings on temper rolling chatter, 275
Perovskites
Power law fluids and Bingham plastics flow models for ceramic tape casting, 215
Petri net
Petri net models applied to analyze automatic sequential pressing systems, 115
Plasma-arc welding
On-line quality monitoring in plasma-arc welding, 270
Powder metallurgy
A neural network approach for solution of the inverse problem for selection of powder metallurgy materials, 419
Precision casting
Manufacture of the die of an automobile deck part based on rapid prototyping and rapid tooling technology, 237
Pre-coated sheet metal
An experimental study on forming characteristics of pre-coated sheet metals, 290
Preform
Influence of the shape and position of the preform in the precision forging of a compressor blade, 80
Process control
Application of neural computing in basic oxygen steelmaking, 310
Near-net-shape manufacture of engineering components using bulge-forming processes: a review, 341
Process optimisation
A technical note cupola efficiency improvement by increasing air blast temperature, 281
Process planning
Process planning for laser-assisted forming, 322
Process simulation
Near-net-shape manufacture of engineering components using bulge-forming processes: a review, 341
Production engineering
Examples of FEM application in manufacturing technology, 450
Pseudo shape function
Analysis of the non-steady state vertical–horizontal rolling process in roughing trains by the three-dimensional finite element method, 53

Quality monitoring
On-line quality monitoring in plasma-arc welding, 270
Quasi-flow corner theory
The numerical analysis of anisotropic sheet metals in deep-drawing processes, 45
Quench
A study on the wear behavior of hardened medium carbon steel, 126

Rapid prototyping
Manufacture of the die of an automobile deck part based on rapid prototyping and rapid tooling technology, 237
Rapid solidification
Development of a nucleation inhibitive coated mold for the rapid solidification of superalloy melt, 202
Rapid tooling
Manufacture of the die of an automobile deck part based on rapid prototyping and rapid tooling technology, 237
Rectangular deep drawing test
An experimental study on forming characteristics of pre-coated sheet metals, 290
Regression
A comparative experimental study of machining characteristics in vibratory, rotary and vibro-rotary electro-discharge machining, 374
Residual magnetization
Effect of current pulses on the drawing stress and properties of Cr17Ni6Mn3 and 4J42 alloys in the cold-drawing process, 13
Resulting microstructure
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Reverse problem
A study on a virtual manufacturing model of a revolving milling cutter in 2-axis numerical control processing, 68
Revolving milling cutter
A study on a virtual manufacturing model of a revolving milling cutter in 2-axis numerical control processing, 68
Rheocast
Macro- and microstructure analysis of SSM A356 produced by electromagnetic stirring, 365
Rolling interface
Industrial experiments and findings on temper rolling chatter, 275
Root pass welding
An optical sensing system for seam tracking and weld pool control in gas metal arc welding of steel pipe, 458

Saturated magnetization
Effect of current pulses on the drawing stress and properties of Cr17Ni6Mn3 and 4J42 alloys in the cold-drawing process, 13
Seam tracking
An optical sensing system for seam tracking and weld pool control in gas metal arc welding of steel pipe, 458

Seamless fittings
Forming of seamless pipe fittings, 432
Selection of materials
A neural network approach for solution of the inverse problem for selection of powder metallurgy materials, 419
Semi-solid die casting
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Set-up cost
Petri net models applied to analyze automatic sequential pressing systems, 115
Set-up time
Petri net models applied to analyze automatic sequential pressing systems, 115
Sheet metal
Process planning for laser-assisted forming, 322
Sheet metal flanging
Prediction and elimination of springback in straight flanging using computer-aided design methods. Part 2: FEM predictions and tool design, 348
Sheet metal forming
An simulation technology of sheet-metal forming with trial-and-error contact algorithm, 1
Research on applying one-step simulation to blank design in sheet metal forming, 111
Finite element simulation of warm deep drawing of aluminium alloy sheet when accounting for heat conduction, 412
Sheet-metal stamping process
Section analysis of industrial sheet-metal stamping processes, 37
SiC
Microstructure transmissibility in preparing SiC ceramics from natural wood, 107
Simulation
Finite-element simulation of stent expansion, 335
Simulation annealing (SA)
Optimum cooling system design of a free-form injection mold using an abductive network, 226
Simulation technology
An simulation technology of sheet-metal forming with trial-and-error contact algorithm, 1
Single-screw plasticating extruder
Experimental validation of a quasi three-dimensional conjugate heat transfer model for the metering section of a single-screw plasticating extruder, 397
SiO_2–ZrO_2–B_2O_3 coating mold
Development of a nucleation inhibitive coated mold for the rapid solidification of superalloy melt, 202
Sliding wear
A study on the wear behavior of hardened medium carbon steel, 126
Small structure
A study on the prediction of the laser weld shape with varying heat source equations and the thermal distortion of a small structure in micro-joining, 208
Sol–gel processing
Development of a nucleation inhibitive coated mold for the rapid solidification of superalloy melt, 202
Solid fraction
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Solidification phase fronts
A numerical study of solidification of *n*-hexadecane based on the enthalpy formulation, 249
Solid-state reaction method
Synthesis of Li_3VO_4 by the citrate sol–gel method and its ionic conductivity, 21
Springback
Variable blankholder force in U-shaped part forming for eliminating springback error, 259
Prediction and elimination of springback in straight flanging using computer-aided design methods. Part 2: FEM predictions and tool design, 348
Square cup drawing
The numerical analysis of anisotropic sheet metals in deep-drawing processes, 45
Stainless steel tube
Experiment study on the variation of wall thickness during dieless drawing of stainless steel tube, 90
Statistical process control
Some fundamental considerations for the control of residual flatness in tension levelling, 385
Steelmaking
Application of neural computing in basic oxygen steelmaking, 310
Steels
The challenge to produce consistent mechanical properties in Nb-HSLA strip steels, 316
Stretching
Shape optimisation using FEA software: a V-shaped anvil as an example, 426
Structural optimisation
Fuzzy-logic application in the structural optimisation of a support plate for electrical accumulator in a motor vehicle, 303
Superalloy
Development of a nucleation inhibitive coated mold for the rapid solidification of superalloy melt, 202
Superplastic injection molding
Fracture types and thickness distribution in superplastic sheets formed with plastic injection molding, 133
Surface
A neural network approach to surface blending based on digitized points, 76
Surface topography
Topography of the flank wear surface, 243

Temper rolling chatter
Industrial experiments and findings on temper rolling chatter, 275
Temperature distribution
Prediction of heat-affected zone using Grey theory, 151
Temperature field
Simulation on temperature field of 50CrV4 automobile gear bar steel in continuous rolling by FEM, 26
Tension levelling
Some fundamental considerations for the control of residual flatness in tension levelling, 385
Thermal diffusivity
Influence of Al_2O_3 or ZrO_2 particulate addition on the microstructure aspects of AlNi and AlSi alloys, 296
Thickness ratio
Fracture types and thickness distribution in superplastic sheets formed with plastic injection molding, 133
Three-step reheating
Induction heating process of an Al–Si aluminum alloy for semi-solid die casting and its resulting microstructure, 355
Titanium alloy
Ultrasonic and electric discharge machining to deep and small hole on titanium alloy, 101
Tool design
The application of a turning tool as the electrode in electropolishing, 6
Transport processes
Computer simulation of transport processes during injection mold-filling and optimization of the molding conditions, 438

Trial-and-error contact algorithm
An simulation technology of sheet-metal forming with trial-and-error contact algorithm, 1
Tribology
Examples of FEM application in manufacturing technology, 450
Turning operation
Topography of the flank wear surface, 243
Turning-tool electrode
The application of a turning tool as the electrode in electropolishing, 6

Ultrasonic vibration
Ultrasonic and electric discharge machining to deep and small hole on titanium alloy, 101
A comparative experimental study of machining characteristics in vibratory, rotary and vibro-rotary electro-discharge machining, 374
U-shaped part
Variable blankholder force in U-shaped part forming for eliminating springback error, 259

Vacuum
Evaluation of the effect of vacuum on mold filling in the magnesium EPC process, 94
Variable blankholder force
Variable blankholder force in U-shaped part forming for eliminating springback error, 259
Vertical–horizontal rolling
Analysis of the non-steady state vertical–horizontal rolling process in roughing trains by the three-dimensional finite element method, 53
Virtual manufacture
A study on a virtual manufacturing model of a revolving milling cutter in 2-axis numerical control processing, 68
Viscous slip
Industrial experiments and findings on temper rolling chatter, 275
Visual sensing
An optical sensing system for seam tracking and weld pool control in gas metal arc welding of steel pipe, 458
V-shaped die
Shape optimisation using FEA software: a V-shaped anvil as an example, 426

Wall thickness
Experiment study on the variation of wall thickness during dieless drawing of stainless steel tube, 90
Warm deep drawing
Finite element simulation of warm deep drawing of aluminium alloy sheet when accounting for heat conduction, 412
Warm forging
Determination of metal material flow stress by the method of C-FEM, 144
Weld pool control
An optical sensing system for seam tracking and weld pool control in gas metal arc welding of steel pipe, 458
Welded seam
An image tracking system for welded seams using fuzzy logic, 169
Woodceramics
Microstructure transmissibility in preparing SiC ceramics from natural wood, 107

X-ray diffraction
Improvement of the magnetic properties of nanocomposite permanent magnetic alloys with Dy and Ga substitutions, 265

Zero inventory
Petri net models applied to analyze automatic sequential pressing systems, 115
Zn–2% Al
Fracture types and thickness distribution in superplastic sheets formed with plastic injection molding, 133